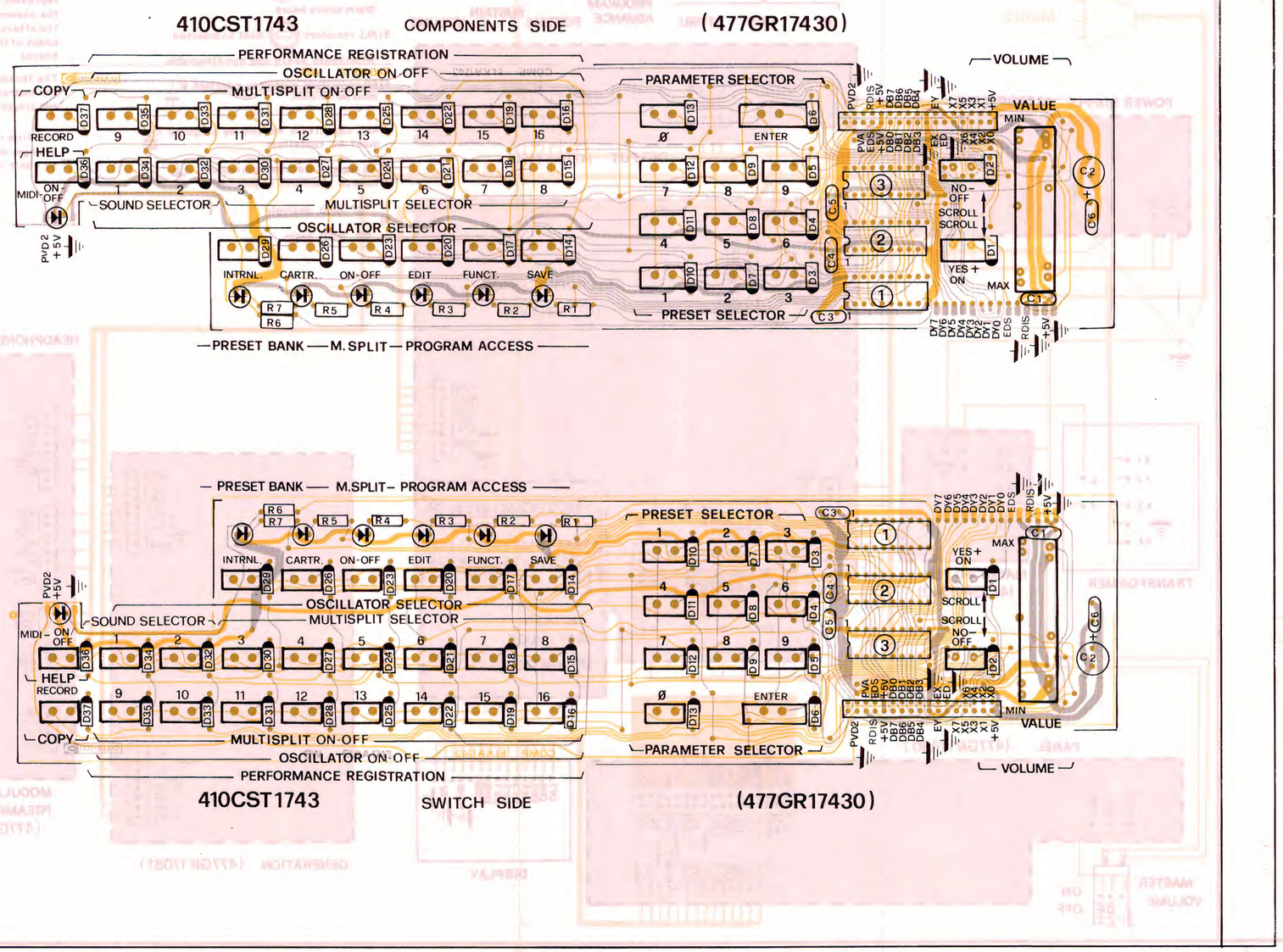



Model : ER33
Sheet No. 2a

Designed by

Drawn by Vholi Vrevo

# WIRING CONNECTION DIAGRAM

1) ALL resistors —□— are carbon film 1/4w 5%
2) ALL resistors marked by a point —□•— must be metal film 2%
3) ALL capacitors marked by a point ⊣•⊢ must be plastic film 2%
4) ALL resistors ⊖ must be mounted 10mm above board
5) ALL resistors ⊖ must be mounted 10mm above board and non-flammable
6) All capacitors marked by asteriscs * must be ceramic
7) ALL capacitors marked by a square must be tantalium
8) All capacitors marked by a square must be electrolitic no polarized
9) GND analogic
   GND logic

ALL diodes are:
FDH 9439 Fairchild
or 125 ITT
or BA 130
or 2pF

The numbers in brackets (477GR ....) represent the ELKA codes of the assembled boards whilst the others represent the ELKA codes of the non-assembled boards

The tensions are measured when the instrument is turned on but not played

The firm reserves the right to make changes without any warning and to their own discretion

MAINS

MIDI
IN OUT THRU

PROGRAM ADVANCE PORTAM. SUSTAIN VOLUME

POWER SUPPLY (477GR17330)
X1 X2 +5V +12V X3 X4

OUTPUT (477GR17490)
IN1 IN2 OUT THR
PAD AC +5V D NC OPE

MICROPROCESSOR
(477GR1705B)
TX RX NC NC
F0 NC RES NC NC NC VCB VCA
−12V +12V +5V +5V MR

HEADPHONE LEVEL GENERAL
SD NC NC SC NC C NC
+12V NC −12V NC +5V NC NC
VCA VCB NC NC NC RES NC F0
NC NC NC NC NC

TRANSFORMER
X1 X2 X3 X4 E F

MAINS FILTER
(477GR17340)
B NC A C D E F

MEMORY CARTRIDGE
(477GR17020)
THRU OM IN1 IN2

GENERATION (477GR17081)
MR RX TX C +5V +5V
SC SD NC NC −12V +12V

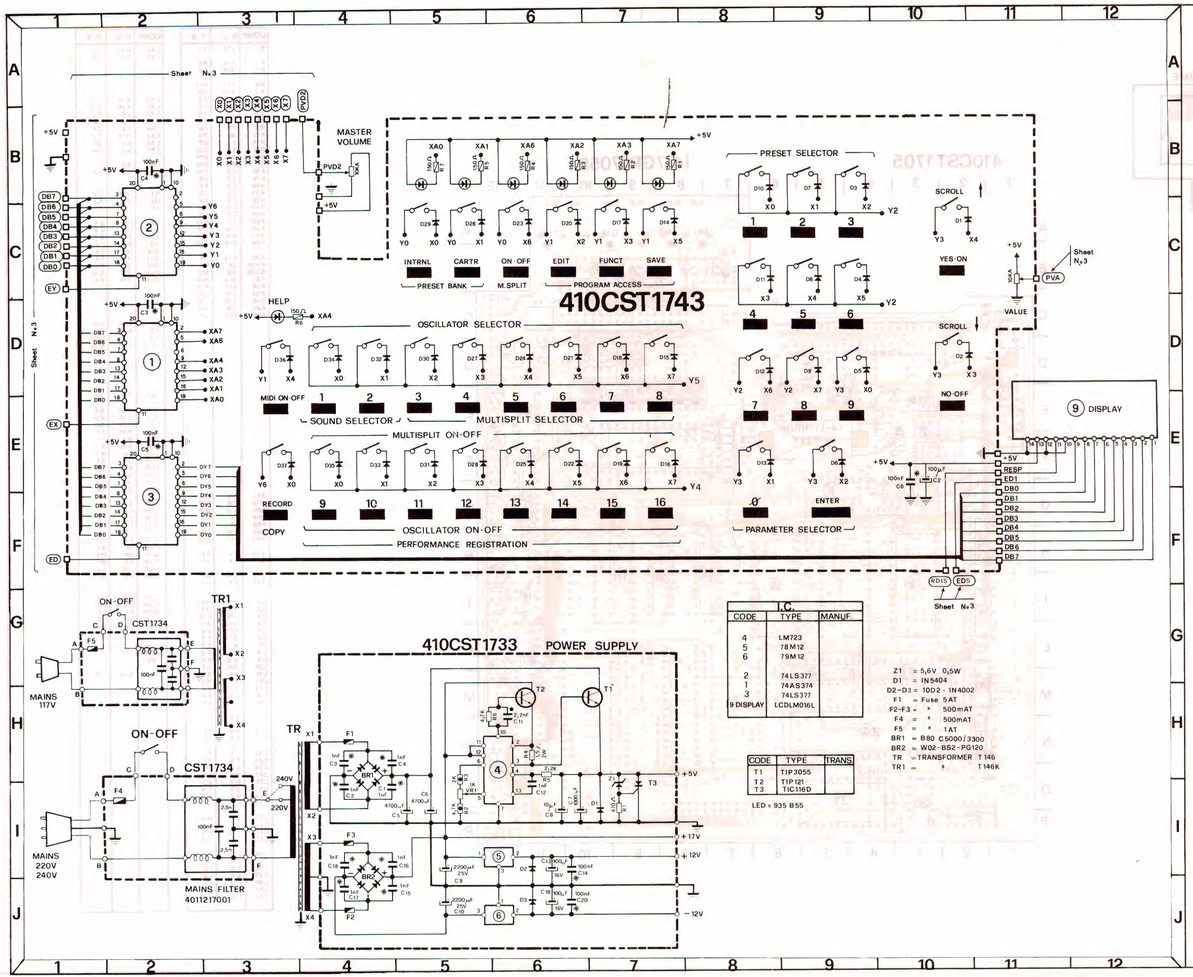
MODULATOR AND PREAMP. OUT
(477GR1707B)

PANEL (477GR17430)
PVD2 +5V C D

DISPLAY

MASTER VOLUME
ON OFF

Model : ER33
Sheet N° 1

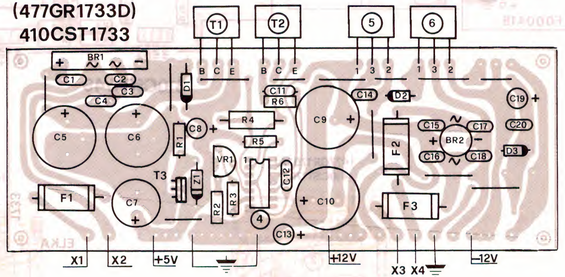


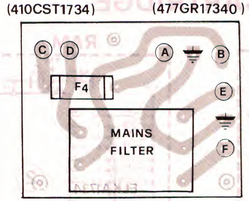

| I.C. | | |
|---|---|---|
| CODE | TYPE | MANUF. |
| 4 | LM723 | |
| 5 | 78M12 | |
| 6 | 79M12 | |
| 2 | 74LS377 | |
| 1 | 74AS374 | |
| 3 | 74LS377 | |
| 9 DISPLAY | LCDLM016L | |

| CODE | TYPE | TRANS. |
|---|---|---|
| T1 | TIP3055 | |
| T2 | TIP121 | |
| T3 | TIC116D | |

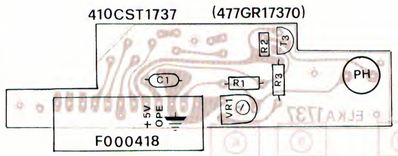
LED = 935 B55

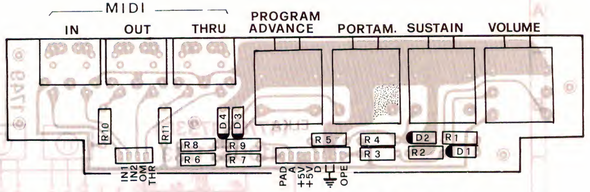
Z1 = 5,6V 0,5W
D1 = IN5404
D2-D3 = 10D2 - 1N4002
F1 = Fuse 5AT
F2-F3 = " 500mAT
F4 = " 500mAT
F5 = " 1AT
BR1 = B80 C5000/3300
BR2 = W02-BS2-PG120
TR = TRANSFORMER T146
TR1 = " T146K



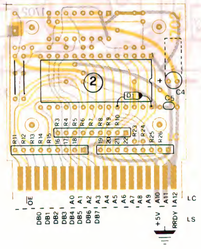

Model: ER 33
Sheet N.2



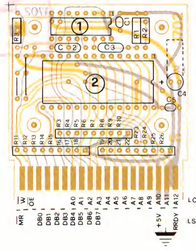




410CST1749 (477GR17490)

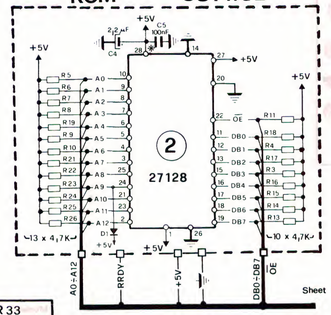
(477GR1702A)
410CST1702

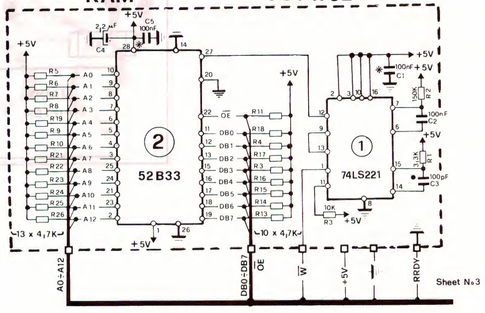


(477GR17020)
410CST1702

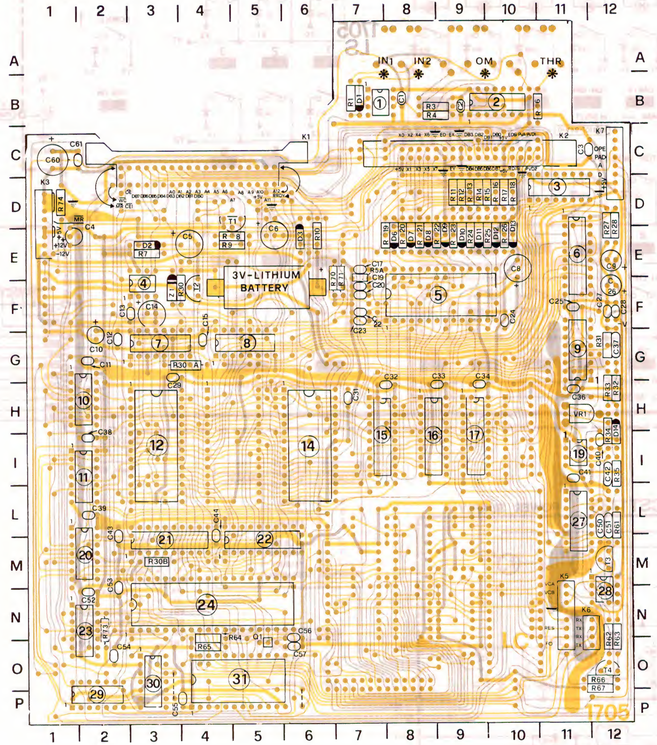


## CARTRIDGE



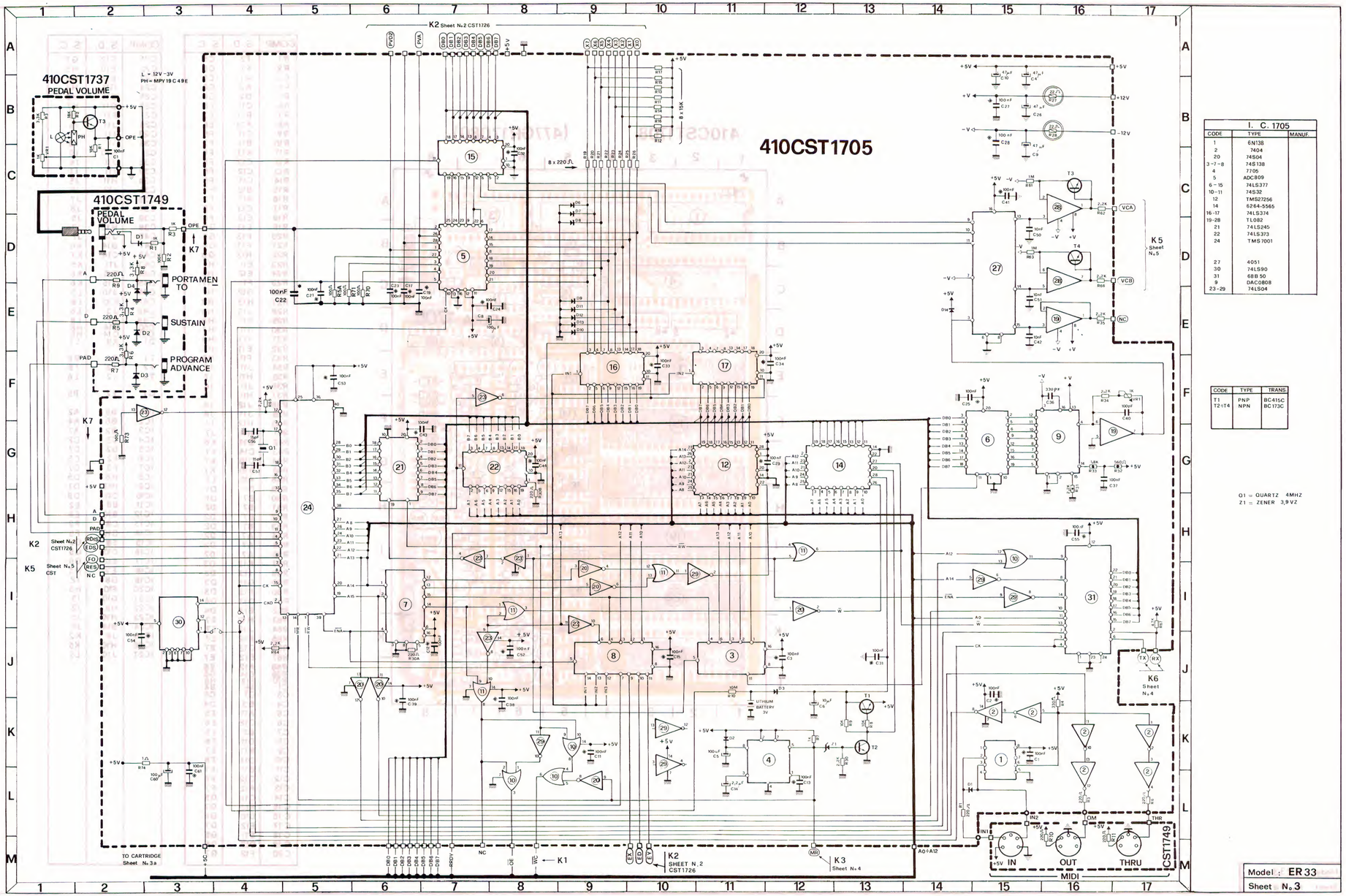

410CST1705 (477GR1705B)




| COMP. | S. D. | P. B. |
|---|---|---|
| R1 | L15 | B7 |
| R3 | L16 | B9 |
| R4 | K16 | B9 |
| R6 | L17 | B11 |
| R7 | K12 | E3 |
| R8 | K13 | E5 |
| R9 | K13 | E5 |
| R10 | J11 | E6 |
| R11 | C9 | D9 |
| R12 | C9 | D9 |
| R13 | B8 | D9 |
| R14 | C9 | D9 |
| R15 | C9 | D10 |
| R16 | C9 | D10 |
| R17 | B9 | D10 |
| R18 | C9 | D10 |
| R19 | C9 | E8 |
| R20 | C9 | E8 |
| R21 | C9 | E8 |
| R22 | C9 | E9 |
| R23 | C10 | E9 |
| R24 | C9 | E9 |
| R25 | C9 | E10 |
| R26 | C9 | E10 |
| R27 | B16 | E12 |
| R28 | B16 | E12 |
| R30 | K13 | F4 |
| R30A | J6 | G4 |
| R30B | H6 | M3 |
| R31 | G16 | G12 |
| R32 | G17 | H12 |
| R33 | G16 | H12 |
| R34 | F16 | I12 |
| R35 | E16 | I12 |
| R36 | D13 | L7 |
| R61 | C16 | L12 |
| R62 | C16 | N12 |
| R63 | D16 | N12 |
| R64 | J4 | N4 |
| R65 | F4 | O4 |
| R66 | D16 | O12 |
| R67 | I17 | O12 |
| R70 | C4 | F7 |
| R71 | B5 | F7 |
| R73 | C10 | N2 |
| R74 | K5 | D1 |
| C1 | K15 | B8 |
| C2 | J15 | B9 |
| C3 | J12 | C12 |
| C4 | A15 | E2 |
| C5 | K11 | E4 |
| C6 | K12 | E5 |
| C7 | K11 | E6 |
| C8 | E8 | E10 |
| C9 | B15 | E12 |
| C10 | A15 | G2 |
| C11 | K9 | G2 |
| C12 | J7 | G2 |
| C13 | L12 | F3 |
| C14 | L11 | F3 |
| C15 | J10 | G4 |
| C17 | E6 | E7 |
| C19 | E6 | F7 |
| C20 | E5 | F7 |
| C22 | E5 | F7 |
| C23 | E6 | F7 |
| C24 | E8 | F10 |
| C25 | F14 | F11 |
| C26 | B15 | F12 |
| C27 | B15 | F12 |
| C28 | B15 | F12 |
| C29 | G12 | G3 |
| C31 | J13 | H7 |
| C32 | C9 | H8 |
| C33 | F10 | H9 |
| C34 | F12 | H9 |
| C36 | F16 | H11 |
| C37 | G16 | G12 |
| C38 | K8 | I2 |
| C39 | K6 | L2 |
| C40 | F17 | I12 |
| C41 | C15 | I11 |
| C42 | E15 | I12 |

| COMP. | S. D. | P. B. |
|---|---|---|
| C43 | G7 | L2 |
| C44 | G8 | L4 |
| C50 | D15 | L12 |
| C51 | E15 | L12 |
| C52 | J8 | N2 |
| C53 | F5 | N2 |
| C54 | J2 | O2 |
| C55 | H16 | P3 |
| C56 | G4 | N6 |
| C57 | G4 | O6 |
| C60 | K5 | C1 |
| C61 | K5 | C2 |
| D1 | L14 | B7 |
| D2 | K11 | E3 |
| D3 | J12 | E6 |
| D6 | C9 | E8 |
| D7 | C9 | E8 |
| D8 | D9 | E8 |
| D9 | E9 | E9 |
| D10 | E9 | E9 |
| D11 | E9 | E10 |
| D12 | E9 | E10 |
| D13 | E14 | K12 |
| T1 | K13 | D5 |
| T2 | K13 | F4 |
| T3 | C16 | O12 |
| T4 | D16 | M12 |
| Q1 | G4 | O5 |
| VR1 | F17 | H11 |
| IC1 | K15 | B8 |
| IC2 | K16 | B10 |
| IC3 | J11 | D11 |
| IC4 | K12 | F3 |
| IC5 | D7 | F9 |
| IC6 | G15 | E11 |
| IC7 | I6 | G3 |
| IC8 | J9 | G5 |
| IC9 | G16 | G11 |
| IC10 | K9 | H2 |
| IC11 | I8 | I2 |
| IC12 | G11 | I3 |
| IC14 | G13 | I6 |
| IC15 | C7 | I7 |
| IC16 | F9 | I8 |
| IC17 | F11 | I9 |
| IC19 | E16 | I11 |
| IC20 | J6 | M2 |
| IC21 | G6 | M3 |
| IC22 | G8 | M5 |
| IC23 | C10 | N2 |
| IC24 | H5 | N4 |
| IC27 | D15 | L11 |
| IC28 | D16 | N12 |
| IC29 | K8 | P2 |
| IC30 | I3 | O3 |
| IC31 | I16 | Q4 |
| LITHIUM BATTERY 3V | K17 | H11 |
| Z1 | K12 | F3 |

Model : ER 33
Sheet N° 3a

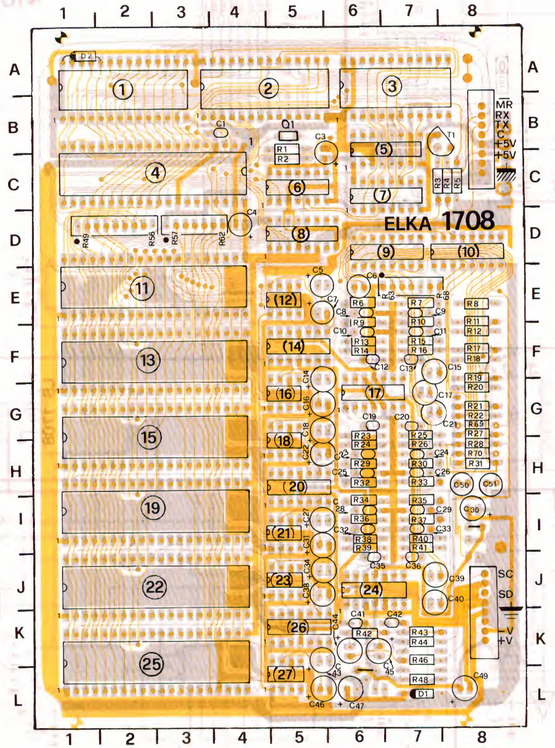



| I. C. 1705 | | |
|---|---|---|
| CODE | TYPE | MANUF. |
| 1 | 6N138 | |
| 2 | 7404 | |
| 20 | 74S04 | |
| 3-7-8 | 74S138 | |
| 4 | 7705 | |
| 5 | ADC809 | |
| 6 - 15 | 74LS377 | |
| 10 - 11 | 74S32 | |
| 12 | TMS27256 | |
| 14 | 6264-5565 | |
| 16 -17 | 74LS374 | |
| 19-28 | TL082 | |
| 21 | 74LS245 | |
| 22 | 74LS373 | |
| 24 | TMS 7001 | |
| 27 | 4051 | |
| 30 | 74LS190 | |
| 31 | 6BB 50 | |
| 9 | DAC0808 | |
| 23-29 | 74LS04 | |

| CODE | TYPE | TRANS. |
|---|---|---|
| T1 T2÷T4 | PNP NPN | BC 415C BC 173C |

Model : ER 33
Sheet N° 3

410CST1708 (477GR17080)

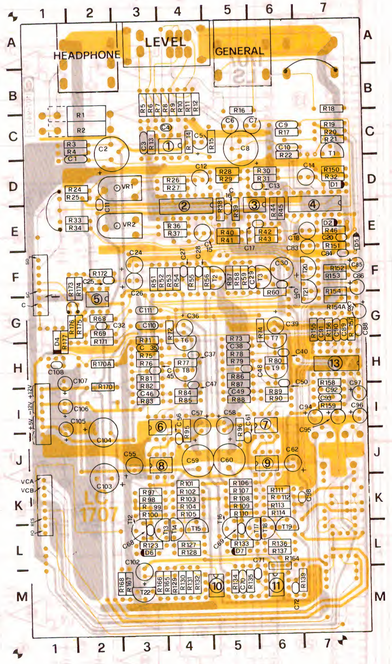



| COMP. | S. D. | S. C. |
|---|---|---|
| R1 | F2 | C5 |
| R2 | F1 | C5 |
| R3 | A1 | C8 |
| R4 | A2 | C8 |
| R5 | D2 | C8 |
| R6 | C11 | E6 |
| R7 | B11 | E7 |
| R8 | A13 | E8 |
| R9 | C11 | F6 |
| R10 | B11 | F7 |
| R11 | A13 | F8 |
| R12 | C13 | F8 |
| R13 | C12 | F6 |
| R14 | C11 | F6 |
| R15 | B12 | F7 |
| R16 | A11 | F7 |
| R17 | C13 | F8 |
| R18 | E13 | F8 |
| R19 | E13 | G8 |
| R20 | F13 | G8 |
| R21 | F13 | G8 |
| R22 | H13 | G8 |
| R23 | E11 | H6 |
| R24 | E12 | H6 |
| R25 | F11 | H7 |
| R26 | G12 | H7 |
| R27 | H13 | H8 |
| R28 | J13 | H8 |
| R29 | E11 | H6 |
| R30 | G11 | H7 |
| R31 | I13 | H8 |
| R32 | E11 | H6 |
| R33 | F11 | H7 |
| R34 | J11 | I6 |
| R35 | H11 | I7 |
| R36 | J11 | I6 |
| R37 | H11 | I7 |
| R38 | J12 | I6 |
| R39 | J11 | J6 |
| R40 | H12 | I7 |
| R41 | H11 | J7 |
| R42 | B14 | K6 |
| R43 | C14 | K7 |
| R44 | D15 | K7 |
| R46 | B15 | K7 |
| R48 | K10 | L7 |
| R49 | B7 | D1 |
| R50 | B7 | D1 |
| R51 | B7 | D2 |
| R52 | B7 | D2 |
| R53 | B7 | D2 |
| R54 | A7 | D2 |
| R55 | A7 | D2 |
| R56 | A7 | D2 |
| R57 | K13 | D3 |
| R58 | I13 | D3 |
| R59 | G13 | D3 |
| R60 | F13 | D3 |
| R61 | D13 | D4 |
| R62 | B13 | D4 |
| R63 | H12 | E7 |
| R64 | J12 | E7 |
| R65 | F12 | E7 |
| R66 | C12 | E7 |
| R67 | E12 | E7 |
| R68 | A12 | E8 |
| R69 | E14 | G8 |
| R70 | E14 | H8 |
| C1 | A5 | B4 |
| C3 | G1 | C6 |
| C4 | B3 | D4 |
| C5 | A11 | E5 |
| C6 | C12 | E6 |
| C7 | B2 | E5 |
| C8 | D11 | E6 |
| C9 | B11 | E7 |
| C10 | D11 | F6 |
| C11 | B11 | F7 |
| C12 | C12 | F6 |
| C13 | A12 | F7 |
| C14 | C11 | G5 |
| C15 | A12 | G7 |
| C16 | D10 | G5 |
| C17 | E12 | G7 |
| C18 | E11 | G5 |
| C19 | D12 | G6 |
| C20 | F12 | G7 |

| COMP. | S. D. | S. C. |
|---|---|---|
| C21 | F12 | G7 |
| C22 | E10 | H5 |
| C23 | E11 | H6 |
| C24 | G11 | H7 |
| C25 | E11 | H6 |
| C26 | G11 | H7 |
| C27 | F11 | I5 |
| C28 | J11 | I6 |
| C29 | I11 | I7 |
| C30 | I1 | I8 |
| C31 | G10 | I5 |
| C32 | J11 | I6 |
| C33 | I11 | I7 |
| C34 | H11 | J5 |
| C35 | I12 | J6 |
| C36 | H12 | J7 |
| C37 | I3 | J8 |
| C38 | I10 | J5 |
| C39 | H12 | J7 |
| C40 | J12 | J7 |
| C41 | B14 | K6 |
| C42 | C14 | K7 |
| C43 | J11 | K5 |
| C44 | B15 | K6 |
| C45 | D15 | K6 |
| C46 | J10 | L5 |
| C47 | K10 | L6 |
| C48 | J3 | L6 |
| C49 | J1 | L8 |
| C50 | B14 | H8 |
| C51 | C14 | H8 |
| D1 | K9 | L7 |
| | | |
| T1 | A1 | B8 |
| T2 | I2 | I8 |
| T3 | I2 | L6 |
| | | |
| Q1 | E2 | B5 |
| | | |
| IC1 | B5 | A2 |
| IC2 | B6 | A4 |
| IC3 | B2 | A7 |
| IC4 | C3 | C2 |
| IC5 | G2 | C7 |
| IC6 | F2 | C5 |
| IC7 | F5 | C7 |
| IC8 | H5 | D5 |
| IC9 | H13 | D7 |
| IC10 | C13 | D8 |
| IC11 | B8 | E2 |
| IC12 | B10 | E5 |
| IC13 | C8 | F2 |
| IC14 | C10 | F5 |
| IC15 | E8 | G2 |
| IC16 | C10 | G5 |
| IC17 | E12 | G6 |
| IC18 | E10 | H5 |
| IC19 | G8 | I2 |
| IC20 | F10 | H5 |
| IC21 | G10 | I5 |
| IC22 | H8 | J2 |
| IC23 | H10 | J5 |
| IC24 | B14 | J6 |
| IC25 | J8 | K2 |
| IC26 | H10 | K5 |
| IC27 | J10 | L5 |

Model : ER33
Sheet No. 4a

410CST1707 (477GR1707B)

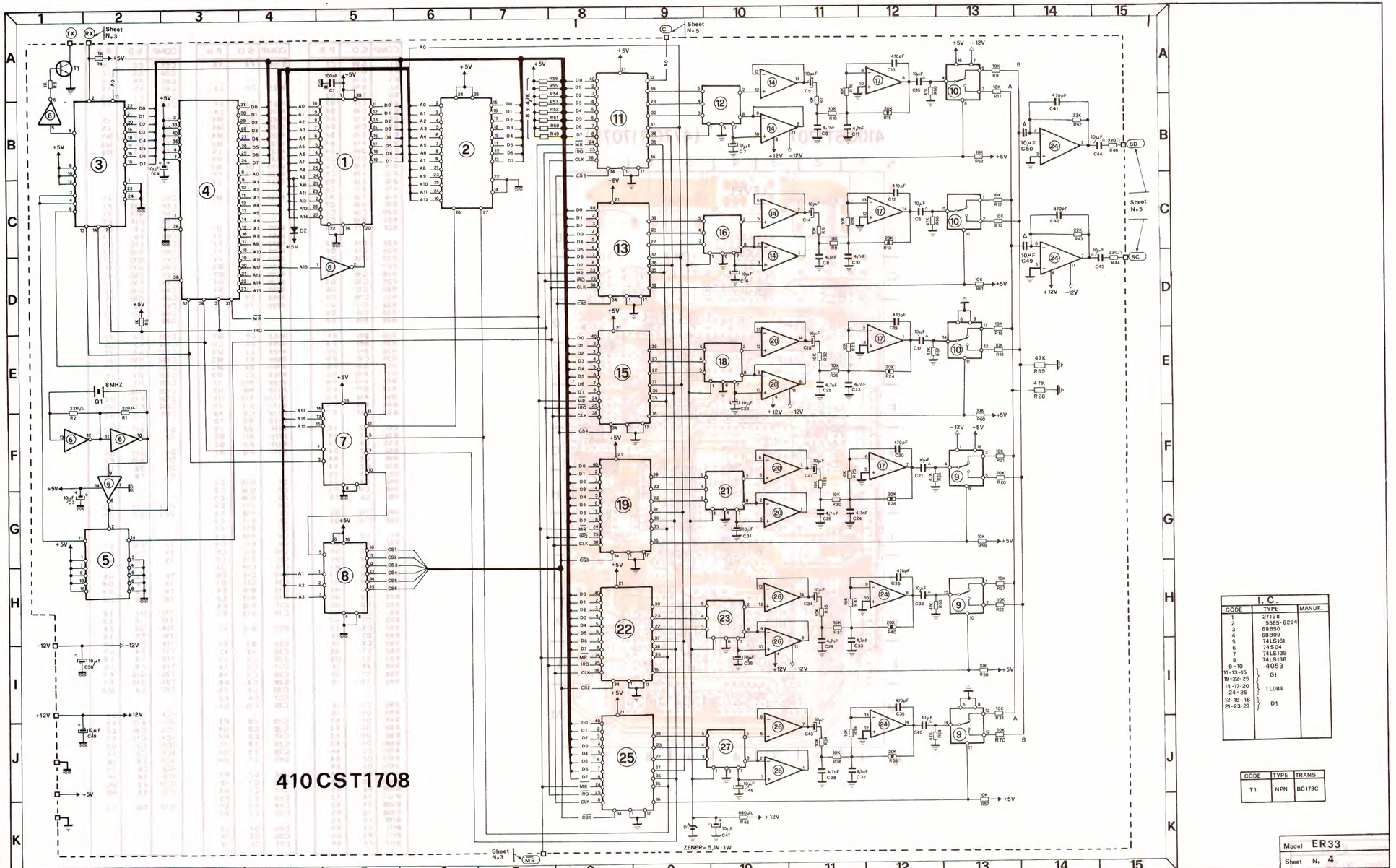



| COMP. | S.D. | P.B. |
|---|---|---|
| R1 | G19 | C2 |
| R2 | G19 | C2 |
| R3 | G18 | C2 |
| R4 | G18 | C2 |
| R5 | E18 | B3 |
| R6 | E17 | B3 |
| R7 | D18 | B4 |
| R8 | E18 | B4 |
| R9 | D18 | B4 |
| R10 | E18 | B4 |
| R11 | F18 | B4 |
| R12 | D18 | B4 |
| R13 | G17 | C3 |
| R14 | F18 | C4 |
| R15 | F18 | C5 |
| R16 | E18 | B5 |
| R17 | E17 | C6 |
| R18 | F18 | B7 |
| R19 | B19 | C7 |
| R20 | C19 | C7 |
| R21 | B19 | C7 |
| R22 | E17 | C6 |
| R24 | B14 | D2 |
| R25 | C14 | D2 |
| R26 | C15 | D4 |
| R27 | C15 | D4 |
| R28 | C16 | D5 |
| R29 | C16 | D5 |
| R30 | C17 | D6 |
| R31 | C16 | D6 |
| R32 | C17 | D7 |
| R33 | C14 | E2 |
| R34 | B14 | E2 |
| R36 | B15 | E4 |
| R37 | B15 | E4 |
| R38 | B15 | E5 |
| R39 | C15 | E5 |
| R40 | B16 | E5 |
| R41 | B16 | E5 |
| R42 | B16 | E6 |
| R43 | B17 | E6 |
| R44 | A18 | E6 |
| R45 | B18 | E6 |
| R46 | B17 | E7 |
| R51 | B3 | F3 |
| R52 | C3 | F4 |
| R53 | C3 | F4 |
| R54 | C3 | F4 |
| R55 | C3 | F4 |
| R56 | C5 | F5 |
| R57 | C4 | F5 |
| R58 | C4 | F5 |
| R59 | C4 | F5 |
| R60 | C5 | F6 |
| R68 | C12 | G2 |
| R69 | C9 | G2 |
| R71 | C9 | G3 |
| R72 | B9 | G4 |
| R73 | E9 | G5 |
| R74 | D9 | G6 |
| R75 | C8 | H3 |
| R76 | C8 | H3 |
| R77 | C8 | H4 |
| R78 | E8 | H5 |
| R79 | E8 | H5 |
| R80 | E8 | H6 |
| R81 | C7 | H3 |
| R82 | C7 | H3 |
| R83 | C6 | I3 |
| R84 | C7 | I4 |
| R85 | C6 | I4 |
| R86 | E7 | H5 |
| R87 | E7 | H5 |
| R88 | E6 | I5 |
| R89 | E7 | I6 |
| R90 | E6 | I6 |
| R95 | C5 | I4 |
| R96 | D5 | I5 |
| R97 | D6 | K3 |
| R98 | D9 | K3 |
| R99 | D8 | K3 |
| R100 | D6 | K3 |
| R101 | D6 | K4 |
| R102 | D8 | K4 |
| R103 | D8 | K4 |
| R104 | D8 | K4 |
| R105 | D8 | K4 |
| R106 | F6 | K5 |
| R107 | F6 | K5 |
| R108 | F9 | K5 |
| R109 | F8 | K5 |
| R110 | F6 | K5 |
| R111 | F9 | K6 |
| R112 | F8 | K6 |
| R113 | F8 | K6 |

| COMP. | S.D. | P.B. |
|---|---|---|
| R114 | F8 | K6 |
| R123 | D3 | L3 |
| R127 | D8 | L4 |
| R128 | D8 | L4 |
| R129 | E3 | M4 |
| R130 | E2 | M4 |
| R131 | E2 | M4 |
| R132 | D3 | M4 |
| R133 | F7 | L5 |
| R134 | E3 | M5 |
| R135 | D4 | M5 |
| R136 | F8 | L6 |
| R137 | F8 | L6 |
| R139 | E4 | M7 |
| R150 | D14 | D7 |
| R151 | D12 | E7 |
| R152 | G15 | F7 |
| R153 | G16 | F7 |
| R154 | G15 | F7 |
| R154A | G14 | G4 |
| R155 | E10 | G7 |
| R156 | D10 | G7 |
| R157 | C9 | G7 |
| R158 | E9 | H7 |
| R159 | F9 | I7 |
| R163 | G5 | M7 |
| R164 | E4 | L6 |
| R165 | E3 | M3 |
| R166 | E3 | M3 |
| R167 | E2 | M3 |
| R168 | E2 | M3 |
| R169 | H10 | I3 |
| R170 | H8 | H2 |
| R170A | F13 | H2 |
| R171 | E11 | G2 |
| R172 | C2 | F2 |
| R173 | B2 | F2 |
| R174 | B2 | F2 |
| R175 | B11 | G2 |
| R176 | B11 | G2 |
| R177 | G12 | G1 |
| C1 | G18 | D2 |
| C2 | G18 | C3 |
| C3 | G18 | C3 |
| C4 | F17 | C4 |
| C5 | F18 | C4 |
| C6 | E17 | C5 |
| C7 | E17 | C5 |
| C8 | F18 | C5 |
| C9 | E17 | C6 |
| C10 | E17 | C6 |
| C11 | A15 | E2 |
| C12 | C14 | D4 |
| C13 | C16 | D6 |
| C14 | C17 | D7 |
| C15 | B14 | E4 |
| C16 | A15 | E5 |
| C17 | B16 | E6 |
| C18 | B17 | E7 |
| C20 | B18 | E7 |
| C24 | B3 | F3 |
| C25 | B2 | F2 |
| C26 | C3 | F3 |
| C27 | C3 | F4 |
| C28 | C3 | F4 |
| C29 | C4 | F6 |
| C30 | C5 | F6 |
| C31 | C4 | F6 |
| C32 | C12 | G2 |
| C35 | C8 | H3 |
| C36 | C9 | G4 |
| C37 | C8 | H4 |
| C38 | E8 | H5 |
| C39 | E9 | G6 |
| C40 | E8 | H6 |
| C45 | C7 | H3 |
| C46 | C7 | I3 |
| C47 | C7 | H4 |
| C48 | E7 | H5 |
| C49 | E7 | E5 |
| C50 | E7 | H6 |
| C55 | D7 | J3 |
| C56 | C5 | J4 |
| C57 | C6 | I4 |

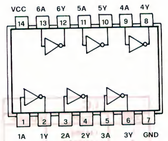
| COMP. | S.D. | P.B. |
|---|---|---|
| C58 | E6 | I5 |
| C59 | D6 | J4 |
| C60 | F6 | J5 |
| C61 | E5 | J5 |
| C62 | F7 | J6 |
| C63 | G3 | J7 |
| C68 | D7 | L3 |
| C69 | F7 | L5 |
| C70 | E3 | M5 |
| C71 | E4 | M5 |
| C72 | E4 | M6 |
| C83 | C12 | E7 |
| C84 | B18 | F7 |
| C85 | G16 | F7 |
| C86 | G14 | F7 |
| C87 | C9 | G7 |
| C88 | F9 | G7 |
| C89 | E10 | G7 |
| C90 | E10 | G7 |
| C91 | D10 | G7 |
| C92 | D10 | I7 |
| C93 | C10 | I7 |
| C94 | F10 | I7 |
| C95 | D10 | I7 |
| C96 | D10 | I7 |
| C97 | E9 | I7 |
| C98 | H5 | K7 |
| C99 | H4 | L7 |
| C101 | G4 | K7 |
| C102 | E3 | L3 |
| C103 | H8 | J2 |
| C104 | H10 | J2 |
| C105 | H7 | I1 |
| C106 | H9 | I1 |
| C107 | H7 | H1 |
| C108 | H12 | H1 |
| C109 | F13 | H2 |
| C110 | E11 | G3 |
| C111 | C11 | G3 |
| D1 | B17 | D7 |
| D2 | B17 | E7 |
| D4 | G13 | G1 |
| D5 | A18 | E7 |
| D6 | D8 | L3 |
| D7 | F8 | L5 |
| VR1 | C15 | D3 |
| VR2 | B15 | E3 |
| T1 | B19 | C7 |
| T2 | C4 | F5 |
| T3 | C5 | F6 |
| T6 | C9 | H4 |
| T7 | E9 | G6 |
| T8 | C8 | H4 |
| T9 | E8 | H6 |
| T12 | D7 | L3 |
| T13 | D8 | L3 |
| T14 | D8 | L4 |
| T15 | F8 | L4 |
| T16 | F7 | L5 |
| T17 | F8 | L5 |
| T18 | F8 | L6 |
| T19 | F8 | L6 |
| T20 | G15 | F7 |
| T21 | G15 | F7 |
| T22 | E3 | M3 |
| IC1 | G18 | C4 |
| IC2 | B15 | E4 |
| IC3 | C16 | E6 |
| IC4 | C13 | E7 |
| IC5 | C2 | G2 |
| IC6 | C6 | I3 |
| IC7 | E6 | I6 |
| IC8 | C6 | J3 |
| IC9 | E6 | J6 |
| IC10 | E2 | M5 |
| IC11 | E4 | M6 |
| IC13 | D10 | H7 |

Model : ER33
Sheet N₀ 5a



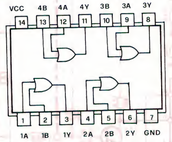

| I. C. | | |
|---|---|---|
| CODE | TYPE | MANUF. |
| 1 | 27128 | |
| 2 | 5565-6264 | |
| 3 | 68B50 | |
| 4 | 68B09 | |
| 5 | 74LS161 | |
| 6 | 74S04 | |
| 7 | 74LS139 | |
| 8 | 74LS138 | |
| 9 - 10 | 4053 | |
| 11 - 13 - 15 - 19 - 22 - 25 | G1 | |
| 14 - 17 - 20 - 24 - 26 | TL084 | |
| 12 - 16 - 18 - 21 - 23 - 27 | D1 | |

| CODE | TYPE | TRANS. |
|---|---|---|
| T1 | NPN | BC173C |



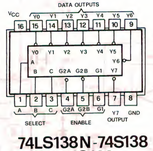

## 7404-74S04-74LS04

HEX INVERTERS



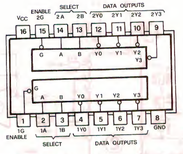

## 74S32

QUADRUPLE POSITIVE-OR



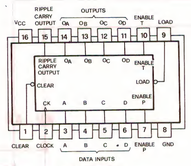

## 74LS138N-74S138 74HC138

3-TO-8 LINE DECODERS/MULTIPLEXERS



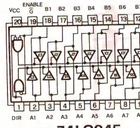

## 74LS139

DUAL 2-TO-4 LINE DECODERS/ MULTIPLEXERS



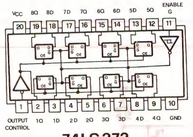

## 74 LS161

SYNCHRONOUS 4 BIT CONTERS



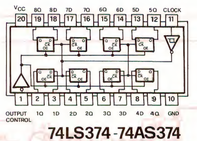

## 74LS245

OCTAL BUS TRANCEIVERS



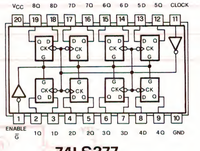

## 74LS 373

OCTAL D-TYPE LATCHES




## 74LS374-74AS374

OCTAL D-TYPE FLIP-FLOPS

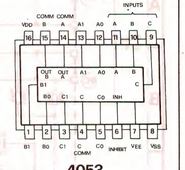



## 74LS377

OCTAL D-TYPE FLIP-FLOPS

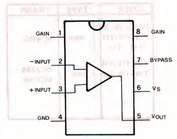
## 4051

SINGLE 8-CHANNEL MULTIPLEXER/ DEMULTIPLEXER



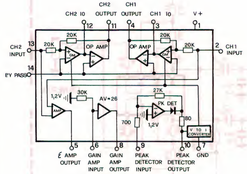

## 4053

TRIPLE 2 CHAN ANALOG MULTIPLEXER DE MULTIPLEXER



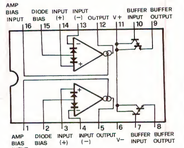

## LM386

LOW VOLTAGE AUDIO POWER AMPLIFIER



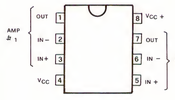

## LM1894

DINAMIC NOISE REDUCTION SYSTEM DNR LTD



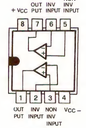

## 13600

DUAL OPERATIONAL TRANSCONDUTTANCE AMPLIFIERS WITH LINEARIZING DIODES AND BUFFERS



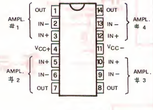

## TL062

D, GR,OR P DUAL-IN-LINE PACKAGE



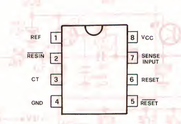

## TL082

JFET-INPUT OPERATIONAL AMPLIFIER




## TL084

JFET-INPUT OPERATIONAL AMPLIFIERS




## TL7705

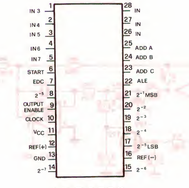
D OR P DUAL-IN-LINE PACKAGE

## DAC0808

8 BIT D/A CONVERTERS

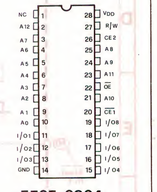
## HC4514

4-TO-16 LINE DECODER/LATCH



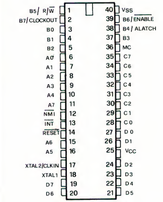

## ADC0809

8-BIT μ P COMPATIBLE A/D CONVERTERS WITH 8-CHANNEL MULTIPLEXER




## 5565-6264

8, 192 WORD x 8 BIT CMOS STATIC RAM

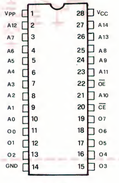



## TMS7001

8-BIT MICROCOMPUTER

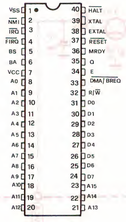
## 27128

16K x 8 BYTES EPROM



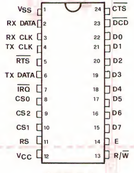

## 27256

256K (32K x 8) UV ERASABLE PROM



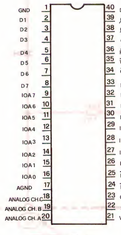

## 68B09

8-BIT MICROPROCESSOR



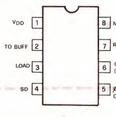

## 68B50

ASYNCHRONOUS COMMUNICATIONS INTERFACE ADAPTER




## G1

SOUND GENERATIONS

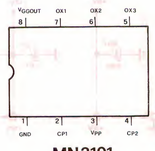



## D1

DIGITAL ANALOGIC

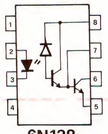
## MN3009

TERMINAL ASSIGNMENTS



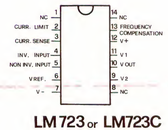

## MN3101

CLOCK GENERATOR DRIVER



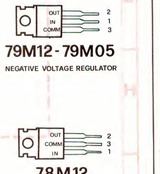
## 6N138

SPLIT DARLINGTON OPTOISOLATORS




## LM723 or LM723C

VOLTAGE REGULATORS



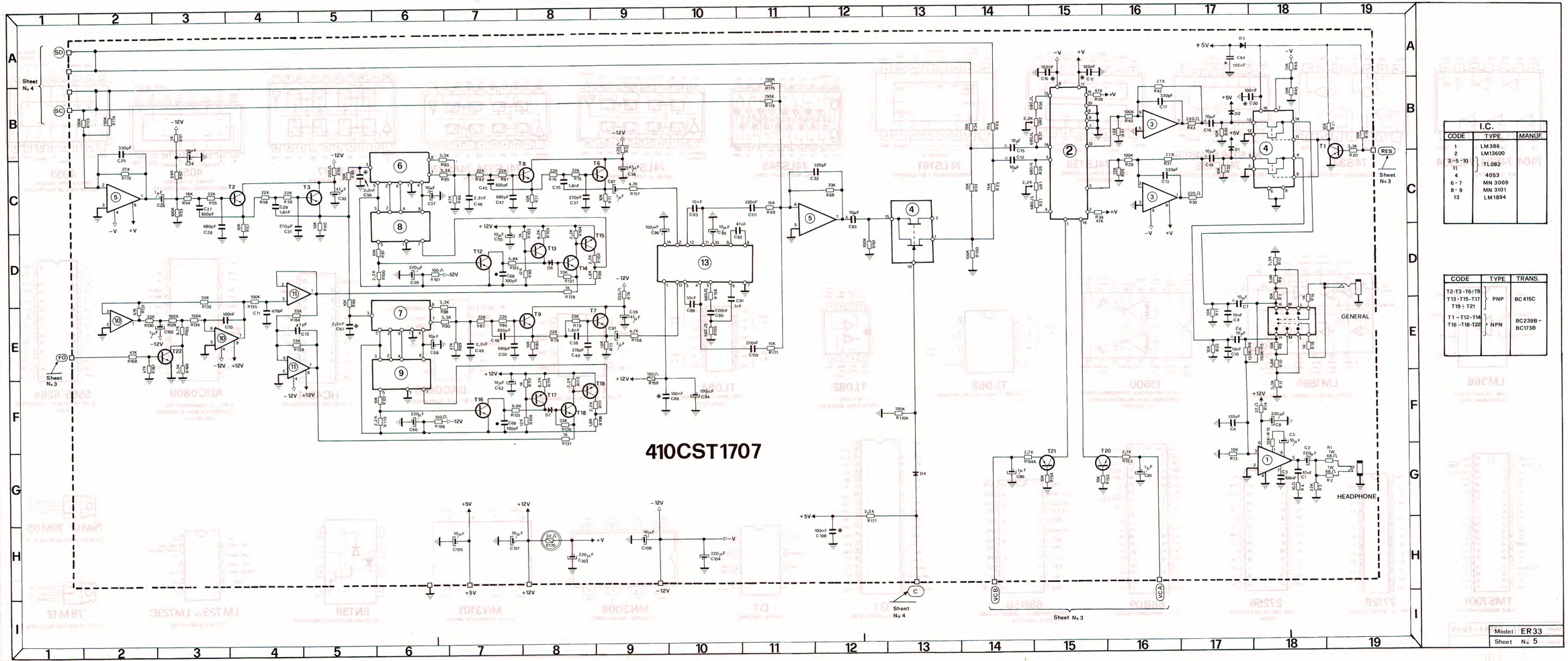

## 79M12-79M05

NEGATIVE VOLTAGE REGULATOR

## 78M12

POSITIVE VOLTAGE REGULATOR

| | |
|---|---|
| Model | EK44 - EM44 - ER33 |
| Sheet N. | 6a |




| I.C. | | |
|---|---|---|
| CODE | TYPE | MANUF. |
| 1 | LM386 | |
| 2 | LM13600 | |
| 3-5-10 | TL082 | |
| 11 | | |
| 4 | 4053 | |
| 6 - 7 | MN 3009 | |
| 8 - 9 | MN 3101 | |
| 13 | LM1894 | |

| CODE | TYPE | TRANS. |
|---|---|---|
| T2-T3-T6-T9 T13-T15-T17 T19 ÷ T21 | PNP | BC 415C |
| T1 - T12 - T14 T16 - T18 - T22 | NPN | BC239B - BC173B |

Model: ER33
Sheet N. 5